041

WD 97/24445

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: July 22, 2003, 11:37:13 ; Search time 38 Seconds
(without alignments)
2051.358 Million cell updates/sec

Title: US-09-833-118-18
Perfect score: 3103
Sequence: 1 DAHKSEVAHRFKDLGEENFK.....TCFAEEGKKLVAASQAALGL 585

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_101002:*
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22: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
23: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	3103	100.0	585	10	AAP90388	Mature human serum
2	3103	100.0	585	11	AAR05318	Human serum albumi
3	3103	100.0	585	11	AAR08457	Human serum albumi
4	3103	100.0	585	16	AAR80301	Human serum albumi
5	3103	100.0	585	18	AAO20111	HSA protein sequen
6	3103	100.0	585	21	AAZ84873	Amino acid sequenc
7	3103	100.0	585	21	AAY83946	Yeast codon-biased
8	3103	100.0	585	22	ABB79006	Human mature album
9	3103	100.0	585	22	AAE13399	Human albumin (HA)
10	3103	100.0	585	22	AAM52567	Mature human serum
11	3103	100.0	585	22	AAE13129	Human albumin (HA)
12	3103	100.0	585	22	AAE12403	Human albumin (HA)
13	3103	100.0	585	22	AAB08578	Human serum albumi
14	3103	100.0	585	23	ABG63321	Human serum albumi
15	3103	100.0	585	23	ABJ00986	B lymphocyte stimu
16	3103	100.0	585	23	ABG33847	Human B lymphocyte
17	3103	100.0	585	23	AAU75220	Mature form of hum
18	3103	100.0	609	21	AAB36542	Recombinant human
19	3103	100.0	609	21	AAB36549	Recombinant human
20	3103	100.0	609	21	AAY78147	Pre human serum al
21	3103	100.0	610	14	AAR39510	Chimeric human ser
22	3103	100.0	670	21	AAB36543	Recombinant human
23	3103	100.0	670	21	AAB36550	Recombinant human
24	3103	100.0	783	14	AAR39473	Prepro-HSA-G-CSF c
25	3103	100.0	787	14	AAR39477	G-CSF-(Gly)4-HSA c
26	3103	100.0	853	14	AAR39472	HSA-vWF(470-713) f
27	3099	99.9	585	10	AAP93344	Sequence of mature
28	3099	99.9	585	19	AAW59841	Mature protein of
29	3099	99.9	608	17	AAR96229	Human serum albumi
30	3099	99.9	609	4	AAP30089	Sequence of human
31	3099	99.9	609	17	AAR96232	Human serum albumi
32	3099	99.9	609	17	AAR94572	Cancer metastasis
33	3099	99.9	609	17	AAR88913	Human serum albumi
34	3099	99.9	609	19	AAW48095	Human serum albumi
35	3099	99.9	609	20	AAY06994	Human albumin. Ho
36	3099	99.9	609	22	AAB04148	Myosin light chain
37	3097	99.8	779	18	AAW22719	Human serum albumi
38	3097	99.8	784	18	AAW22717	Human serum albumi
39	3097	99.8	789	18	AAW22718	Human serum albumi
40	3097	99.8	794	18	AAW22720	Human serum albumi
41	3096	99.8	609	7	AAP60092	Sequence of prepro
42	3095	99.7	586	8	AAP70767	Human serum albumi
43	3095	99.7	609	13	AAR25309	HSA. Pichia pasto
44	3095	99.7	754	17	AAR92149	HSA:Fc gamma RII f
45	3095	99.7	978	19	AAW48096	Human serum albumi

ALIGNMENTS

RESULT 1
AAP90388
ID AAP90388 standard; protein; 585 AA.
XX
AC AAP90388;
XX
DT 01-NOV-1989 (first entry)
XX
DE Mature human serum albumin polypeptide.
XX
KW Human serum albumin; mature protein; new polypeptides;
KW plasma expanders.
XX
OS Homo sapiens (Human).
XX
PN EP322094-A.
XX
PD 28-JUN-1989.
XX
PF 25-OCT-1988; 88EP-0310000.
XX
PR 30-OCT-1987; 87GB-0025529.
XX
PA (DELT) DELTA BIOTECH LTD.
XX
PI Ballance DJ, Hinchliffe E, Geisow MJ, Senior PJ;
XX
DR WPI; 1989-186464/26.
DR N-PSDB; AAN90128.
XX
PT New N-terminal fragments of human serum albumin
PT - esp. useful as blood plasma expanders.
XX

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PS   Disclosure; fig 2; 20pp; English.
XX
CC   Mature protein of human serum albumin (see corresp. AAN90128).
CC   Used to make N-terminal fragments which are used as plasma
CC   expanders, or as substitutes for HSA or BSA, in tissue culture
CC   media.
XX
SQ   Sequence   585 AA;

  Query Match          100.0%;  Score 3103;  DB 10;  Length 585;
  Best Local Similarity  100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
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Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
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Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 2
AAR05318
ID   AAR05318 standard; protein; 585 AA.
XX
AC   AAR05318;
XX
DT   08-OCT-1990  (first entry)
XX
DE   Human serum albumin gene product.
XX
KW   Human serum albumin; HSA-A; yeast; ds.
XX
OS   Homo sapiens.
XX
PN   JP02117384-A.
XX
PD   01-MAY-1990.
XX
PF   26-OCT-1988;   88JP-0268302.
XX
PR   26-OCT-1988;   88JP-0268302.
XX
PA   (TOFU ) TOA MENRYO KOGYO KK.
XX
DR   WPI; 1990-176228/23.
DR   N-PSDB; AAQ04719.
XX
PT   Human serum albumin prepn. by yeast host -
PT   by culturing transformed plasmid yeast to produce serum, and
PT   removing it.
XX
PS   Disclosure; ; pp; Japanese.
XX
CC   Mature HSA-A may be produced using the sequence incorporated into a
CC   plasmid vector with suitable controllers, and transfered to a yeast
CC   expression system.
XX
SQ   Sequence   585 AA;

  Query Match          100.0%;  Score 3103;  DB 11;  Length 585;
  Best Local Similarity  100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
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Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 3
AAR08457
ID   AAR08457 standard; Protein; 585 AA.
XX
AC   AAR08457;
XX
DT   16-APR-1991  (first entry)
XX
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DE   Human serum albumin.
XX
KW   HSA; folding; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          123..303
FT                   /label= A
FT   Region          1..303
FT                   /label= B
FT   Region          123..585
FT                   /label= C
XX
PN   JP02227079-A.
XX
PD   25-AUG-1989.
XX
PF   10-SEP-1990;    90JP-0250926.
XX
PR   06-OCT-1988;    88JP-0250926.
XX
PA   (TOFU ) TONEN CORP.
XX
DR   WPI; 1990-317325/42.
DR   N-PSDB; AAQ06099.
XX
PT   New human serum albumin fragments - used to bond medicines and for
PT   stable folding of protein(s).
XX
PS   Claim 1; Fig 8; 24pp; Japanese.
XX
CC   Fragments A-C of HSA are expressed as fusion proteins with the
CC   signal peptide of E. coli alkaline phosphatase. The fragments are
CC   selected for their specific properties. The C-terminal truncated
CC   fragment, B, does not bind long-chain fatty acids but does bind to
CC   various medicines at the central region. The N-terminal truncated
CC   fragment, C, has good stability in protein folding. The central
CC   segment, A, has characteristics of both B and C.
CC   See also AAQ06096-Q06098.
XX
SQ   Sequence   585 AA;

  Query Match             100.0%;  Score 3103;  DB 11;  Length 585;
  Best Local Similarity   100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 4
AAR80301
ID   AAR80301 standard; Protein; 585 AA.
XX
AC   AAR80301;
XX
DT   17-JAN-1996  (first entry)
XX
DE   Human serum albumin.
XX
KW   Serum albumin; HSA; aspartyl protease-3; Yap3p;
KW   Saccharomyces cerevisiae.
XX
OS   Homo sapiens.
XX
PN   WO9523857-A1.
XX
PD   08-SEP-1995.
XX
PF   01-MAR-1995;   95WO-GB00434.
XX
PR   05-MAR-1994;   94GB-0004270.
XX
PA   (DELZ ) DELTA BIOTECHNOLOGY LTD.
XX
PI   Gilbert SC,  Kerry-Williams SM;
XX
DR   WPI; 1995-320572/41.
DR   N-PSDB; AAQ98695.
XX
PT   Yeast with reduced levels of aspartyl protease 3 proteolytic
PT   activity - used to secrete human albumin without prodn. of the 45
PT   kD fragment
XX
PS   Example 1; Page 26-28; 50pp; English.
XX
CC   The cDNA given in AAQ98695, which encodes HSA (AAR80301), was subjected
CC   to site-directed mutagenesis to investigate the role of
CC   endoproteases in the generation of a 45 kDa albumin fragment obtd.
CC   when the cDNA is expressed in S. cerevisiae. Mutations were: R410A;
CC   L407A, L408V, V409A; and R410A, K413Q, K414Q. The latter set of
CC   mutations, especially, improved stability of HSA to yeast Yap3p
CC   proteolytic cleavage, allowing increased prodn. of recombinant HSA.
XX
SQ   Sequence   585 AA;

  Query Match             100.0%;  Score 3103;  DB 16;  Length 585;
  Best Local Similarity   100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
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Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
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Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
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Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 5
AAO20111
ID   AAO20111 standard; Protein; 585 AA.
XX
AC   AAO20111;
XX
DT   06-AUG-2002  (first entry)
XX
DE   HSA protein sequence related to the growth hormone protein.
XX
KW   Serum albumin-growth hormone fusion protein; growth hormone;
KW   Down's syndrome.
XX
OS   Unidentified.
XX
PN   KR99076789-A.
XX
PD   15-OCT-1999.
XX
PF   25-JUN-1998;   98KR-0704914.
XX
PR   30-DEC-1995;   95GB-0026733.
PR   19-DEC-1996;   96WO-GB03164.
XX
PA   (DELZ ) DELTA BIOTECHNOLOGY LTD.
XX
DR   WPI; 1997-363680/55.
DR   N-PSDB; AAX99568.
XX
PT   Serum albumin-growth hormone fusion protein - useful to treat growth
PT   hormone related diseases, e.g. Down's syndrome
XX
PS   Disclosure; Fig 6; 21pp; Korean.
XX
CC   The invention relates to a serum albumin-growth hormone fusion protein -
CC   useful to treat growth hormone related diseases such as Down's syndrome.
CC   This sequence represents a HSA protein related to the serum albumin-
CC   growth hormone protein of the invention.
XX
SQ   Sequence   585 AA;
```

```
 Query Match          100.0%;  Score 3103;  DB 18;  Length 585;
 Best Local Similarity   100.0%;  Pred. No. 1e-254;
 Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 6
AAY84873
ID   AAY84873 standard; protein; 585 AA.
XX
AC   AAY84873;
XX
DT   08-AUG-2000  (first entry)
XX
DE   Amino acid sequence of a human albumin protein.
XX
KW   Human; albumin; ischemic state; serum protein; metal ion salt;
KW   perioperative ischemia; ischemia; myocardial infarction;
KW   progressive coronary artery disease.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "optionally acetylated, and claimed under
FT                   claim 56"
XX
PN   WO200020840-A1.
XX
PD   13-APR-2000.
XX
PF   01-OCT-1999;   99WO-US22905.
XX
```

PR 02-OCT-1998; 98US-0102738.
PR 02-OCT-1998; 98US-0165581.
PR 02-OCT-1998; 98US-0165926.
PR 11-JAN-1999; 99US-0115392.
XX
PA (ISCH-) ISCHEMIA TECHNOLOGIES INC.
XX
PI Bar-Or D, Lau E, Winkler JV;
XX
DR WPI; 2000-303843/26.
XX
PT New method for the continuous detection of ischemic states comprises
PT detecting and quantifying the existence of an alteration of the serum
PT protein albumin -
XX
PS Disclosure; Page 97-100; 105pp; English.
XX
CC The present sequence represents human albumin protein. The specification
CC describes a method for the continuous detection of ischemic states. The
CC method comprises detecting and quantifying the existence of an alteration
CC of the serum protein albumin. The method comprises contacting a
CC biological sample containing albumin from the patient with an excess
CC quantity of a metal ion salt, where the metal ion binds to the N-terminus
CC of naturally occurring human albumin, to form a mixture containing bound
CC metal ions and unbound metal ions, and then determining the amount of
CC metal ions bound to the albumin N-terminus. The amount of bound metal
CC ions is correlated to a known value to determine the occurrence or
CC non-occurrence of an ischemic event. The methods are useful for detection
CC of ischemic states. The methods are also useful for distinguishing
CC perioperative ischemia from ischemia caused by , amongst other things,
CC myocardial infarctions and progressive coronary artery disease.
XX
SQ Sequence 585 AA;

Query Match 100.0%; Score 3103; DB 21; Length 585;
Best Local Similarity 100.0%; Pred. No. 1e-254;
Matches 585; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
```

RESULT 7
AAY83946
ID AAY83946 standard; Protein; 585 AA.
XX
AC AAY83946;
XX
DT 28-JUL-2000 (first entry)
XX
DE Yeast codon-biased recombinant human serum albumin protein.
XX
KW Recombinant; human serum albumin; HSA; yeast codon bias; host cell;
KW overlapping oligonucleotide; expression vector.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN CN1239103-A.
XX
PD 22-DEC-1999.
XX
PF 17-JUN-1998; 98CN-0102506.
XX
PR 17-JUN-1998; 98CN-0102506.
XX
PA (HAIJ-) HAIJI BIOENGINEERING CO LTD.
XX
PI Li S, Lu D;
XX
DR WPI; 2000-351198/31.
DR N-PSDB; AAA10091.
XX
PT Process for preparing recombined human serum albumin - which comprises
PT yeast biased sex codons
XX
PS Disclosure; Fig 1; 44pp; Chinese.
XX
CC The method relates to a method of recombinantly producing human serum
CC albumin (HSA) in yeast by altering the coding sequence of HSA to
CC comprise a yeast codon bias. The complete HSA gene (AAA10091) was
CC generated as three synthetic fragments (AAA10092-A10094) joined by
CC recombinant DNA technology. Each HSA fragment was synthesised from
CC overlapping oligonucleotide fragments that were extended. This sequence
CC represents the complete sequence of the HSA encoded by the human gene
CC with a yeast codon bias. The invention also covers a recombinant
CC expression vector, yeast host cells carrying the recombinant expression
CC vector and the process for producing human serum albumin in the yeast
CC host cell, especially in secretory mode.
XX
SQ Sequence 585 AA;

Query Match 100.0%; Score 3103; DB 21; Length 585;
Best Local Similarity 100.0%; Pred. No. 1e-254;
Matches 585; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
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                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDBGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
                 |||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
```

```
RESULT 8
ABB79006
ID   ABB79006 standard; Protein; 585 AA.
XX
AC   ABB79006;
XX
DT   01-AUG-2002  (first entry)
XX
DE   Human mature albumin protein SEQ ID NO:18.
XX
KW   Human; growth hormone; hGH; albumin; human serum albumin; HSA;
KW   albumin fusion protein; cytostatic; anorectic; immunosuppressive;
KW   antidiabetic; antirheumatic; antiarthritic; psoriatic; cancer;
KW   non-Hodgkin's lymphoma; obesity; transplant rejection; psoriasis;
KW   type I diabetes mellitus; rheumatoid arthritis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          1..194
FT                   /label= 1
FT   Domain          1..105
FT                   /label= subdomain
FT   Disulfide-bond  93..62
FT   Disulfide-bond  75..91
FT   Disulfide-bond  90..101
FT   Region          106..119
FT                   /note= "flexible inter-subdomain linker region"
FT   Domain          120..194
FT                   /label= subdomain
FT   Disulfide-bond  124..169
FT   Disulfide-bond  168..177
FT   Domain          195..387
FT                   /label= 2
FT   Domain          195..291
FT                   /label= subdomain
FT   Disulfide-bond  245..253
FT   Disulfide-bond  265..279
FT   Disulfide-bond  278..289
FT   Region          292..315
FT                   /note= "flexible inter-subdomain linker region"
FT   Domain          316..387
FT                   /label= subdomain
FT   Disulfide-bond  316..361
FT   Disulfide-bond  360..369
FT   Domain          388..585
FT                   /label= 3
FT   Domain          388..491
FT                   /label= subdomain
FT   Disulfide-bond  392..438
FT   Disulfide-bond  437..448
FT   Disulfide-bond  461..477
FT   Disulfide-bond  476..487
FT   Region          492..511
FT                   /note= "flexible inter-subdomain linker region"
FT   Domain          513..585
FT                   /label= subdomain
FT   Disulfide-bond  514..559
FT   Disulfide-bond  558..567
XX
PN   WO200179442-A2.
XX
PD   25-OCT-2001.
XX
PF   12-APR-2001; 2001WO-US11850.
XX
PR   12-APR-2000; 2000US-229358P.
PR   25-APR-2000; 2000US-199384P.
PR   21-DEC-2000; 2000US-256931P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Rosen CA,  Haseltine WA;
XX
DR   WPI; 2001-611723/70.
DR   N-PSDB; ABN87288.
XX
PT   New albumin fusion proteins, useful for treating diseases and disorders
PT   such as cancer, comprise therapeutic protein fused to albumin -
XX
PS   Claim 1; Fig 11; 413pp; English.
XX
CC   The present invention describes an albumin fusion protein (I) comprising
CC   a therapeutic protein: X and (a fragment or variant of) albumin
CC   comprising a the fully defined sequence in ABB79006 of 585 amino acids,
CC   (where the fragment or variant has albumin or therapeutic protein: X
CC   activity). (I) can have cytostatic, anorectic, immunosuppressive,
CC   antidiabetic, antirheumatic, antiarthritic and psoriatic activities.
CC   Albumin fusion proteins are stabilised therapeutic proteins e.g.
CC   antibodies to C5, C242 and CD80 useful for treating various diseases
CC   and disorders such as non-Hodgkin's lymphoma, cancer, obesity,
CC   transplant rejection, type I diabetes mellitus, rheumatoid arthritis
CC   and psoriasis. Fusing albumin to therapeutic proteins stabilises the
CC   therapeutic protein, extends the shelf life and retains the in vitro or
CC   in vivo biological activity. It also reduces the need to formulate
CC   protein solutions with large excesses of carrier proteins to prevent
CC   loss of therapeutic proteins due to factors such as binding to the
CC   container. The fusion proteins are easily dispensed with a simple
CC   formulation requiring minimal post storage manipulation. The fusion of
CC   therapeutic proteins to albumin confers stability in aqueous or other
CC   solution. The present sequence represents the mature human albumin (HA)
CC   protein which is used in the exemplification of the present invention.
XX
SQ   Sequence   585 AA;

  Query Match          100.0%;  Score 3103;  DB 22;  Length 585;
  Best Local Similarity  100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
```

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                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLRLAKTYETTLEKC 360
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
                    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
                    |||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585



RESULT 9
AAE13399
ID   AAE13399 standard; Protein; 585 AA.
XX
AC   AAE13399;
XX
DT   12-FEB-2002  (first entry)
XX
DE   Human albumin (HA) protein.
XX
KW   Human; albumin; HA; fusion protein; immune system disorder; syphilis;
KW   transplant rejection; blood related disorder; myocardial infarction;
KW   hyperproliferative disorder; acute myeloid leukaemia; renal disorder;
KW   glomerulonephritis; cardiovascular disorder; arrhythmia; rhinitis;
KW   respiratory disorder; neurological disease; Alzheimer's disease;
KW   endocrine disorder; pheocytochroma; reproductive system disorder;
KW   measles; gastrointestinal disorder; irritable bowel syndrome; HIV;
KW   human immunodeficiency virus; wound healing; renal cell carcinoma;
KW   melanoma; gene therapy.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          54..61
FT                   /label= Loop_I
FT   Domain          76..89
FT                   /label= Loop_II
FT   Domain          92..100
FT                   /label= Loop_III
FT   Domain          170..176
FT                   /label= Loop_IV
FT   Domain          247..252
FT                   /label= Loop_V
FT   Domain          266..277
FT                   /label= Loop_VI
FT   Domain          280..288
FT                   /label= Loop_VII
FT   Domain          362..368
FT                   /label= Loop_VIII
FT   Domain          439..447
FT                   /label= Loop_IX
FT   Domain          461..475
FT                   /label= Loop_X
FT   Domain          478..486
FT                   /label= Loop_XI
FT   Domain          560..566
FT                   /label= Loop_XII
XX
PN   WO200179258-A1.
XX
PD   25-OCT-2001.
XX
PF   12-APR-2001; 2001WO-US12008.
XX
PR   12-APR-2000; 2000US-229356P.
PR   25-APR-2000; 2000US-199384P.
PR   21-DEC-2000; 2000US-256931P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (PRIN-) PRINCIPIA PHARM CORP.
XX
PI   Rosen CA,  Sadeghi H,  Prior CP,  Turner AJ;
XX
DR   WPI; 2001-602931/68.
DR   N-PSDB; AAD22287.
XX
PT   Albumin fusion proteins comprising a therapeutic protein and albumin,
PT   useful in the treating metastatic renal cell carcinoma, metastatic
PT   melanoma, malignant melanoma, renal cell carcinoma, HIV (human
PT   immunodeficiency virus) or infection -
XX
PS   Claim 1; Fig 9; 325pp; English.
XX
CC   The invention relates to albumin fusion proteins comprising therapeutic
CC   protein and human albumin (HA). The albumin fusion proteins are useful
CC   in the treatment, prevention, diagnosis, and/or detection of diseases,
CC   disorders such as immune system disorders (transplant rejection); blood
CC   related disorders (myocardial infarction); hyperproliferative disorders
CC   (childhood acute myeloid leukaemia); renal disorder (glomerulonephritis);
CC   cardiovascular disorders (arrhythmias); respiratory disorders
CC   (non-allergic rhinitis); neurological diseases (Alzheimer's disease);
CC   endocrine disorders (pheocytochroma); reproductive system disorders
CC   (syphilis); infectious diseases (measles); gastrointestinal disorders
CC   (irritable bowel syndrome) and wound healing. The albumin fusion
CC   proteins are also used in the treatment of metastatic renal cell
CC   carcinoma, metastatic melanoma, malignant melanoma and HIV (human
CC   immunodeficiency virus) infection. Nucleic acid encoding albumin fusion
CC   protein is useful in gene therapy. The present sequence is human
CC   albumin (HA) protein.
XX
SQ   Sequence  585 AA;

  Query Match           100.0%;  Score 3103;  DB 22;  Length 585;
  Best Local Similarity  100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 10
AAM52567
ID    AAM52567 standard; Protein; 585 AA.
XX
AC    AAM52567;
XX
DT    05-FEB-2002  (first entry)
XX
DE    Mature human serum albumin.
XX
KW    Human; serum albumin; HA; antiinflammatory; immunosuppressive; cardiant;
KW    nootropic; neuroprotective; gene therapy; immune disorder; wound healing;
KW    hyperproliferative disorder; renal disorder; cardiovascular disorder;
KW    respiratory disorder; neurological disease; endocrine disorder;
KW    reproductive system disorder; infectious disease;
KW    gastrointestinal disorder.
XX
OS    Homo sapiens.
XX
PN    WO200179444-A2.
XX
PD    25-OCT-2001.
XX
PF    12-APR-2001; 2001WO-US12013.
XX
PR    12-APR-2000; 2000US-229358P.
PR    25-APR-2000; 2000US-199384P.
PR    21-DEC-2000; 2000US-256931P.
XX
PA    (HUMA-) HUMAN GENOME SCI INC.
XX
PI    Rosen CA,  Haseltine WA;
XX
DR    WPI; 2001-616755/71.
DR    N-PSDB; ABA03057.
XX
PT    Albumin fusion proteins comprising a therapeutic protein and albumin,
PT    useful in the treating immune system disorders (e.g. transplant
PT    rejection), blood related disorders (e.g. myocardial infarction) and
PT    hyperproliferative disorders -
XX
PS    Claim 1; Fig 15; 606pp; English.
XX
CC    The present invention relates to albumin fusion proteins, which comprise
CC    a therapeutic protein and albumin. The present sequence is the protein
CC    sequence for mature human serum albumin (HA), which was used to generate
CC    the fusion proteins of the present invention. The albumin fusion proteins
CC    are useful in the treatment, prevention, diagnosis, and/or detection of
CC    diseases/disorders such as immune system disorders (e.g. transplant
CC    rejection), blood related disorders (e.g. myocardial infarction),
CC    hyperproliferative disorders (e.g. childhood acute myeloid leukemia),
CC    renal disorders (e.g. glomerulonephritis), cardiovascular disorders (e.g.
CC    arrhythmias), respiratory disorders (e.g. non-allergic rhinitis),
CC    neurological diseases (e.g. Alzheimer's disease), endocrine disorders
CC    (e.g. pheocytochroma), reproductive system disorders (e.g. syphilis),
CC    infectious diseases (e.g. measles), gastrointestinal disorders (e.g.
CC    irritable bowel syndrome) and wound healing.
XX
SQ    Sequence   585 AA;

  Query Match          100.0%;  Score 3103;  DB 22;  Length 585;
  Best Local Similarity   100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 11
AAE13129
ID    AAE13129 standard; Protein; 585 AA.
XX
AC    AAE13129;
XX
DT    28-JAN-2002  (first entry)
XX
DE    Human albumin (HA).
XX
KW    Human; albumin; HA; fusion protein; therapeutic protein; vulnerary;
KW    immune system disorder; transplant rejection; blood related disorder;
KW    myocardial infarction; hyperproliferative disorder; glomerulonephritis;
KW    childhood acute myeloid leukemia; cardiovascular disorder; arrhythmia;
KW    respiratory disorder; gene therapy; non-allergic rhinitis; nootropic;
KW    neurological disease; Alzheimer's disease; reproductive system disorder;
KW    endocrine disorder; pheocytochroma; infectious disease; antiarthritic;
KW    measles; gastrointestinal disorder; irritable bowel syndrome; syphilis;
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KW   wound healing; antiinflammatory; immunosuppressive; neuroprotective;
KW   cardiant; cytostatic; antileukaemic; antirheumatic; antimicrobial;
KW   renal disorder.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          54..61
FT                   /label= Loop_I
FT   Domain          76..89
FT                   /label= Loop_II
FT   Domain          92..100
FT                   /label= Loop_III
FT   Domain          170..176
FT                   /label= Loop_IV
FT   Domain          247..252
FT                   /label= Loop_V
FT   Domain          266..277
FT                   /label= Loop_VI
FT   Domain          280..288
FT                   /label= Loop_VII
FT   Domain          362..368
FT                   /label= Loop_VIII
FT   Domain          439..447
FT                   /label= Loop_IX
FT   Domain          461..475
FT                   /label= Loop_X
FT   Domain          478..486
FT                   /label= Loop_XI
FT   Domain          560..566
FT                   /label= Loop_XII
XX
PN   WO200179443-A2.
XX
PD   25-OCT-2001.
XX
PF   12-APR-2001; 2001WO-US11924.
XX
PR   12-APR-2000; 2000US-229358P.
PR   25-APR-2000; 2000US-199384P.
PR   21-DEC-2000; 2000US-256931P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Rosen CA.  Haseltine WA;
XX
DR   WPI; 2001-616754/71.
DR   N-PSUB; AAD21638.
XX
PT   Albumin fusion proteins comprising a therapeutic protein and albumin,
PT   useful in the treating immune system disorders (e.g. transplant
PT   rejection), blood related disorders (e.g. myocardial infarction) and
PT   hyperproliferative disorders -
XX
PS   Claim 1; Fig 9; 380pp; English.
XX
CC   The invention relates to albumin fusion proteins comprising therapeutic
CC   protein and human albumin (HA). Therapeutic protein fused to albumin
CC   have an extended shelf-life. The albumin fusion proteins are useful in
CC   the treatment, prevention, diagnosis and/or detection of diseases,
CC   disorders such as immune system disorders (e.g. transplant rejection),
CC   blood related disorders (e.g. myocardial infarction), hyperproliferative
CC   disorders (e.g. childhood acute myeloid leukaemia), renal disorders
CC   (e.g. glomerulonephritis), cardiovascular disorders (e.g. arrhythmias),
CC   respiratory disorders (e.g. non-allergic rhinitis), neurological
CC   diseases (e.g. Alzheimer's disease), endocrine disorders (e.g.
CC   phecytochroma), reproductive system disorders (e.g. syphilis),
CC   infectious diseases (e.g. measles), gastrointestinal disorders (e.g.
CC   irritable bowel syndrome) and wound healing. Nucleic acids encoding
CC   albumin fusion protein is used in gene therapy. The present sequence
CC   is human albumin (HA) protein.
XX
SQ   Sequence   585 AA;
```

```
 Query Match          100.0%;  Score 3103;  DB 22;  Length 585;
 Best Local Similarity  100.0%;  Pred. No. 1e-254;
 Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 12
AAE12403
ID   AAE12403 standard; Protein; 585 AA.
XX
AC   AAE12403;
XX
DT   18-DEC-2001  (first entry)
XX
DE   Human albumin (HA).
XX
KW   Human; albumin; HA; immune system disorder; transplant rejection;
KW   blood related disorder; myocardial infarction; glomerulonephritis;
KW   hyperproliferative disorder; childhood acute myeloid leukaemia;
KW   renal cell carcinoma; cardiovascular disorder; vulnerary; melanoma;
KW   arrhythmia; respiratory disorder; non-allergic rhinitis; antileukaemic;
KW   neurological disease; Alzheimer's disease; endocrine disorder; measles;
KW   phecytochroma; reproductive system disorder; neuroprotective; syphilis;
KW   infectious disease; gastrointestinal disorder; wound healing; nootropic;
KW   irritable bowel syndrome; HIV; human immunodeficiency virus infection;
KW   cytostatic; antiinflammatory; gene therapy; immunosuppressive; cardiant;
KW   antiarthritic; antifheumatic; renal disorder; antimicrobial.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          54..61
FT                   /label= Loop_I
```

```
FT   Domain          76..89
FT                   /label= Loop_II
FT   Domain          92..100
FT                   /label= Loop_III
FT   Domain          170..176
FT                   /label= Loop_IV
FT   Domain          247..252
FT                   /label= Loop_V
FT   Domain          266..277
FT                   /label= Loop_VI
FT   Domain          280..288
FT                   /label= Loop_VII
FT   Domain          362..369
FT                   /label= Loop_VIII
FT   Domain          439..447
FT                   /label= Loop_IX
FT   Domain          461..475
FT                   /label= Loop_X
FT   Domain          478..486
FT                   /label= Loop_XI
FT   Domain          560..566
FT                   /label= Loop_XII
XX
PN   WO2000179480-A1.
XX
PD   25-OCT-2001.
XX
PF   12-APR-2001; 2001WO-US11991.
XX
PR   12-APR-2000; 2000US-229358P.
PR   25-APR-2000; 2000US-199384P.
PR   21-DEC-2000; 2000US-256931P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Rosen CA,  Haseltine WA;
XX
DR   WPI; 2001-616756/71.
DR   N-PSDB; AAD20005.
XX
PT   Albumin fusion proteins comprising a therapeutic protein and albumin,
PT   useful in the treating metastatic renal cell carcinoma, metastatic
PT   melanoma, malignant melanoma, renal cell carcinoma, HIV (human
PT   immunodeficiency virus) or infection -
XX
PS   Claim 1; Fig 9; 394pp; English.
XX
CC   The invention relates to human albumin (HA) fusion proteins and their
CC   corresponding nucleic acid sequences. Therapeutic proteins fused to
CC   albumin or its fragments have an extended shelf-life. The albumin
CC   fusion proteins are useful in the treatment, prevention, diagnosis,
CC   and/or detection of diseases, disorders such as immune system
CC   disorders (e.g. transplant rejection), blood related disorders (e.g.
CC   myocardial infarction), hyperproliferative disorders (e.g. childhood
CC   acute myeloid leukaemia, metastatic renal cell carcinoma, metastatic
CC   melanoma, malignant melanoma, renal cell carcinoma), renal disorders
CC   (e.g. glomerulonephritis), cardiovascular disorders (e.g. arrhythmias),
CC   respiratory disorders (e.g. non-allergic rhinitis), neurological
CC   diseases (e.g. Alzheimer's disease), endocrine disorders (e.g.
CC   pheocytochroma), reproductive system disorders (e.g. syphilis),
CC   infectious diseases (e.g. measles), gastrointestinal disorders (e.g.
CC   irritable bowel syndrome), HIV (human immunodeficiency virus) infection
CC   and wound healing. Nucleic acids encoding albumin fusion protein is
CC   used in gene therapy. The present sequence is human albumin.
XX
SQ   Sequence   585 AA;

  Query Match             100.0%;  Score 3103;  DB 22;  Length 585;
  Best Local Similarity   100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
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Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||

Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 13
AAE08578
ID   AAE08578 standard; Protein; 585 AA.
XX
AC   AAE08578;
XX
DT   19-NOV-2001  (first entry)
XX
DE   Human serum albumin (HSA).
XX
KW   Human; albumin; cancer; cell proliferation; drug screening; biopsy.
XX
OS   Homo sapiens.
XX
PN   US6274305-B1.
XX
PD   14-AUG-2001.
XX
PF   19-DEC-1996;  96US-0769746.
XX
PR   19-DEC-1996;  96US-0769746.
XX
PA   (TUPT ) UNIV TUFTS.
XX
PI   Sonnenschein C,  Soto AM;
XX
DR   WPI; 2001-540371/60.
DR   N-PSDB; AAD11488.
XX
PT   Measuring human cell proliferation, useful in drug screening to
PT   determine the potential for inhibiting cancer cell proliferation and
PT   for evaluating biopsied tumors, comprises employing albumin-derived
PT   peptide -
XX
```

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PS   Claim 1; Fig 1; 20pp; English.
XX
CC   The invention related to a method for testing cancer cells. The method is
CC   useful for measuring human cancer cell proliferation, particularly for
CC   determining the potential for inhibiting cancer cells proliferation using
CC   albumin-derived peptides. The invention is also useful for drug screening
CC   assays, as well as for evaluating biopsied tumours. The present sequence
CC   is human serum albumin (HSA) related to the invention.
XX
SQ   Sequence   585 AA;

  Query Match             100.0%;  Score 3103;  DB 22;  Length 585;
  Best Local Similarity   100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 14
ABG63321
ID   ABG63321 standard; protein; 585 AA.
XX
AC   ABG63321;
XX
DT   27-AUG-2002  (first entry)
XX
DE   Human serum albumin (HSA) protein.
XX
KW   Albumin fusion protein; therapeutic protein X; human albumin; HA;
KW   human serum albumin; HSA; cancer; reproductive disorder;
KW   digestive disorder; immune disorder; endocrine disorder;
KW   haematopoietic disorder; neural disorder; connective disorder;
KW   cytostatic; antiinfertility; antiinflammatory; antiulcer;
KW   immunomodulator; anti-HIV; antidiabetic; haemostatic; nootropic;
KW   neuroprotective; antiparkinsonian; antimicrobial; neuroleptic;
KW   osteopathic; antiarthritic.
XX
OS   Homo sapiens.
XX
PN   WO200177137-A1.
XX
PD   18-OCT-2001.
XX
PF   12-APR-2001; 2001WO-US11988.
XX
PR   12-APR-2000; 2000US-229358P.
PR   25-APR-2000; 2000US-199384P.
PR   21-DEC-2000; 2000US-256931P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Rosen CA,  Haseltine WA;
XX
DR   WPI; 2002-010886/01.
DR   N-PSDB; ABK93280.
XX
PT   New fusion protein for treating disease e.g. diabetes comprises an
PT   albumin fused to a therapeutic protein -
XX
PS   Claim 1; Fig 15; 2102pp; English.
XX
CC   The present invention relates to albumin fusion proteins comprising a
CC   therapeutic protein X and human albumin (HA, also known as human serum
CC   albumin, HSA). The proteins are useful for treating a disease or
CC   disorder that may be modulated by therapeutic protein X. The albumin
CC   extends the shelf-life of protein X, and may increase its biological
CC   in vitro/in vivo activity. The protein is useful for treating and
CC   diagnosing disorders such as cancer, reproductive disorders, digestive
CC   disorders (e.g. Crohn's disease, ulcerative colitis), immune disorders
CC   (e.g. acquired immunodeficiency syndrome, AIDS), endocrine disorders
CC   (e.g. diabetes), haematopoietic disorders, neural disorders
CC   (e.g. Alzheimer's, Parkinson's, Creutzfeldt-Jacob disease,
CC   encephalomyelitis, meningitis, schizophrenia), and connective disorders
CC   (e.g. osteoporosis, arthritis). The present sequence represents HSA
CC   (HA) protein.
XX
SQ   Sequence   585 AA;

  Query Match             100.0%;  Score 3103;  DB 23;  Length 585;
  Best Local Similarity   100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        361 CAAADPHECYAKVFDEPKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


RESULT 15
ABJ00986
ID   ABJ00986 standard; Protein; 585 AA.
XX
AC   ABJ00986;
XX
DT   05-SEP-2002  (first entry)
XX
DE   B lymphocyte stimulator protein binding peptide related protein.
XX
KW   B lymphocyte stimulator protein binding protein; BLyS; immune disease;
KW   allergy; proliferative disease; infectious disease; arteriosclerosis;
KW   inflammatory disorder; hypergammaglobulinaemia; blood clotting;
KW   ischaemia; graft-versus-host disease; neurodegenerative disease;
KW   immunosuppressive; nephrotropic; antirheumatic; antiarthritic;
KW   neuroprotective; cytostatic; immunostimulant; antitumour; anti-HIV;
KW   antiasthmatic; antiallergic; thyromimetic; antianaemic; haemostatic;
KW   dermatological; antiinflammatory; cardiant; ophthalmological; uropathic;
KW   antidiabetic; antithyroid; antidepressant; hepatotropic.
XX
OS   Homo sapiens.
XX
PN   WO2002016411-A2.
XX
PD   28-FEB-2002.
XX
PF   17-AUG-2001; 2001WO-US25850.
XX
PR   18-AUG-2000; 2000US-226700P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Beltzer JP,  Potter DM,  Fleming TL,  Rosen CA;
XX
DR   WPI; 2002-499775/53.
XX
PT   The treatment of various diseases e.g. rheumatoid arthritis, comprises
PT   administering B Lymphocyte stimulator binding polypeptide  -
XX
PS   Disclosure; Page 379-382; 387pp; English.
XX
CC   The present invention relates to the treatment, prevention or
CC   amelioration of a disease or disorder associated with: aberrant B
CC   lymphocyte stimulator (BLyS), BLyS receptor expression or activity; cells
CC   of haematopoietic origin; or proliferative disease; and reducing,
CC   inhibiting or stimulating immunoglobulin production, B cell proliferation
CC   and graft rejection involving administration of BLyS binding polypeptide.
CC   The BLyS binding polypeptides are used in the treatment, prevention or
CC   amelioration of diseases such as immune system diseases, proliferative
CC   diseases, diseases of cells of hematopoietic origin, graft rejection,
CC   allergies, infectious diseases, arteriosclerosis, inflammatory disorders,
CC   hypergammaglobulinaemia, blood clotting disorders, ischaemia, and
CC   neurodegenerative diseases. The present sequence is a protein described
CC   in the invention.
XX
SQ   Sequence   585 AA;

  Query Match             100.0%;  Score 3103;  DB 23;  Length 585;
```

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  Best Local Similarity   100.0%;  Pred. No. 1e-254;
  Matches  585;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 DAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCPFEDHVKLVNEVTEFAKTCVADESAE 60

Qy         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 NCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEV 120

Qy        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 DVMCTAFHDNEETFLKKYLYEIARRHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLP 180

Qy        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 KLDELRDEGKASSAKQRLKCASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTK 240

Qy        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 VHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPA 300

Qy        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDFSVVLLRLAKTYETTLEKC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 DLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARRHPDFSVVLLRLAKTYETTLEKC 360

Qy        361 CAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CAAADPHECYAKVFDEPKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST 420

Qy        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES 480

Qy        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT 540

Qy        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585
              |||||||||||||||||||||||||||||||||||||||||||||
Db        541 KEQLKAVMDDFAAFVEKCCKADDKETCFAEEGKKLVAASQAALGL 585


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Job time : 41 secs
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